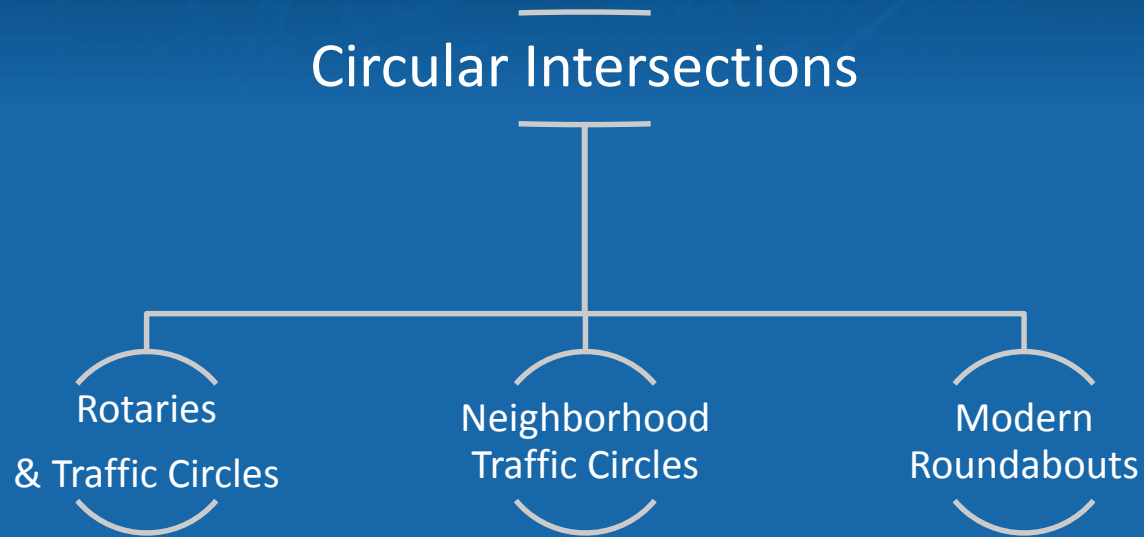


# **Roundabout Considerations**

**Christina Barry, PE**  
**GDOT Office of Traffic Operations**

# Isn't a roundabout just a traffic circle?



# A Modern Roundabout...

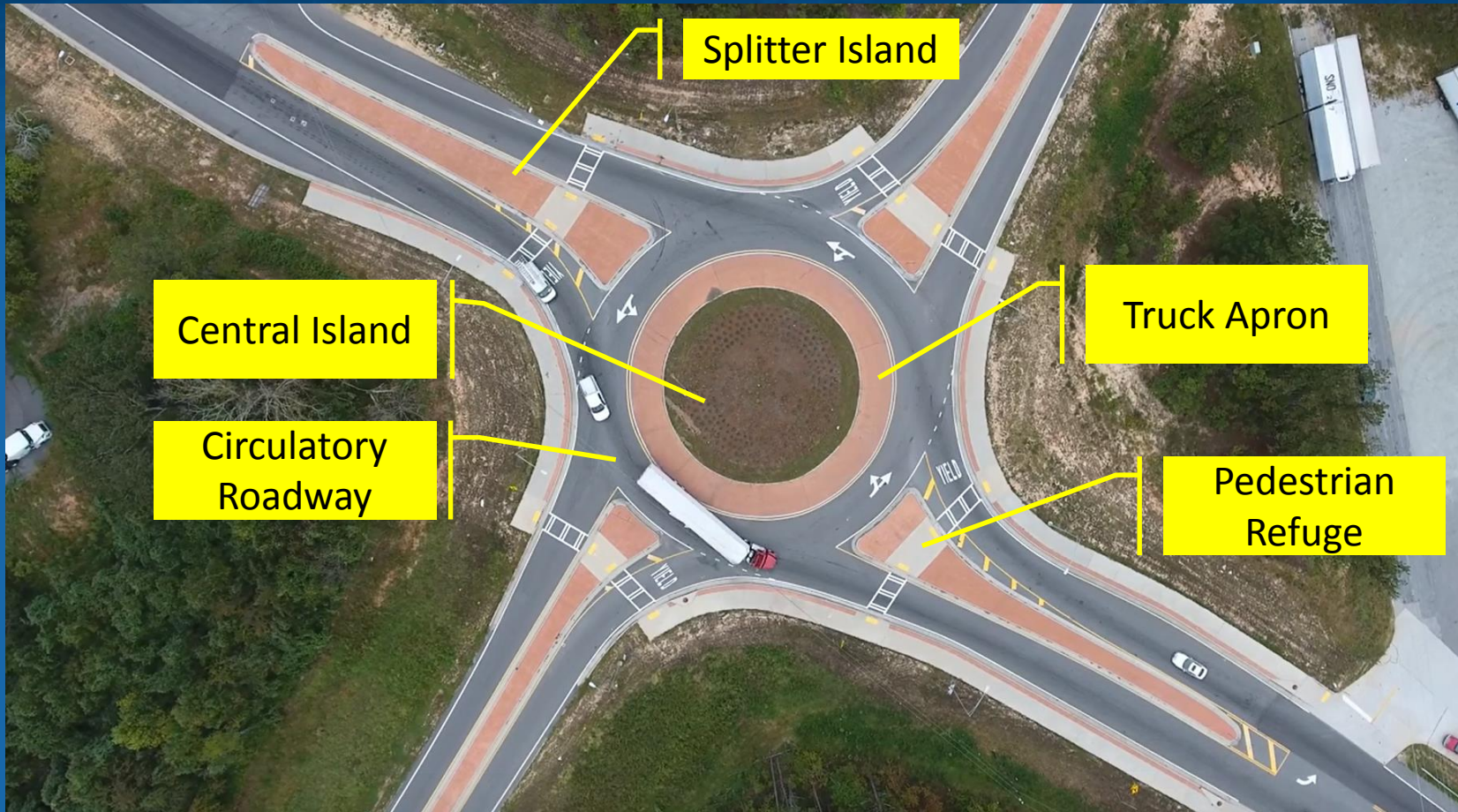
- A compact intersection where all traffic flows counter-clockwise around a central island.
- Entering vehicles yield to vehicles already in the roundabout.
- Approach lanes are designed to deflect vehicles into the correct entry path.
- Designed for a speed of 30-40 mph.

Vehicles yield, not merge, when entering a roundabout.

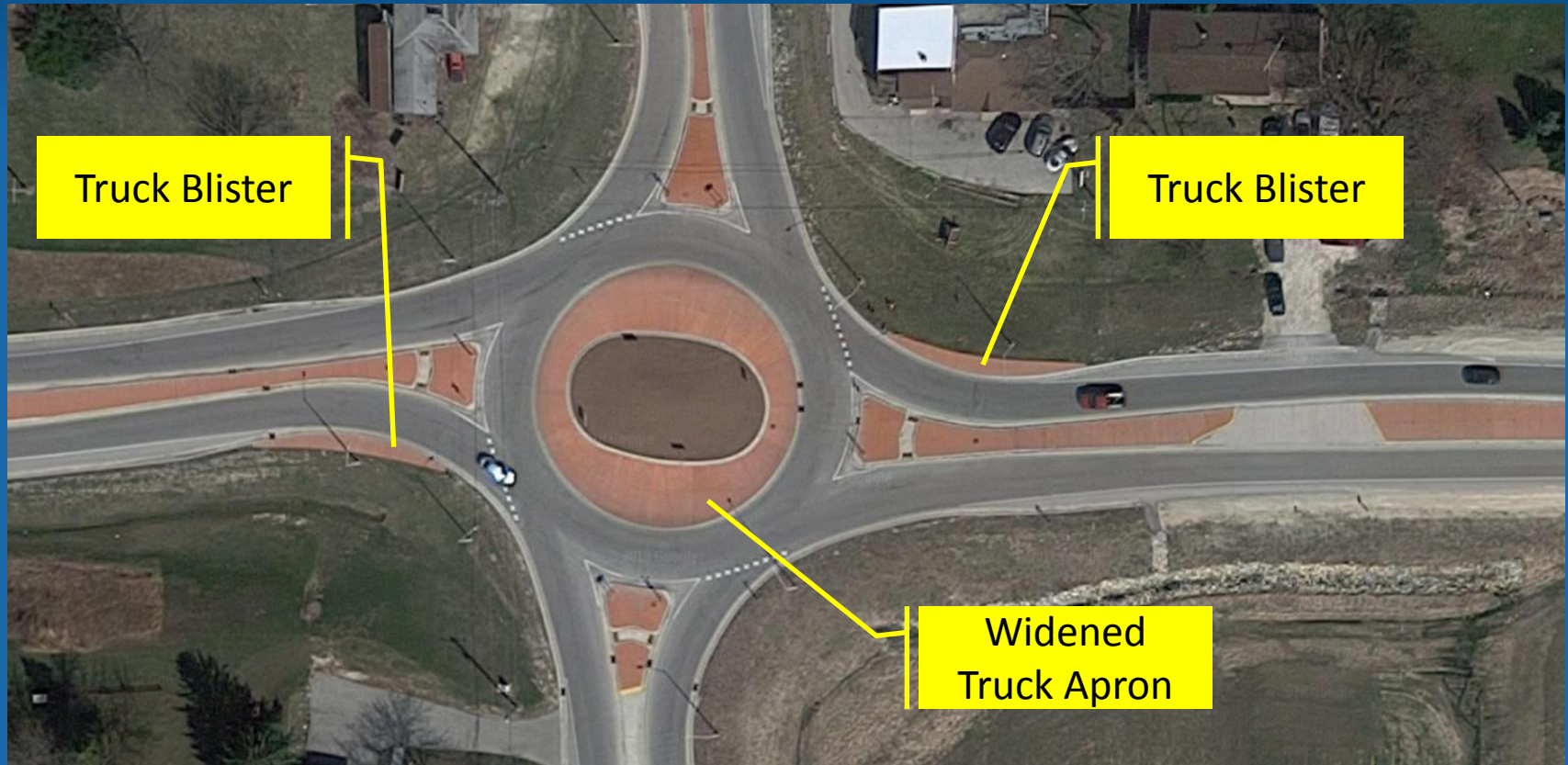




# A Modern Roundabout...

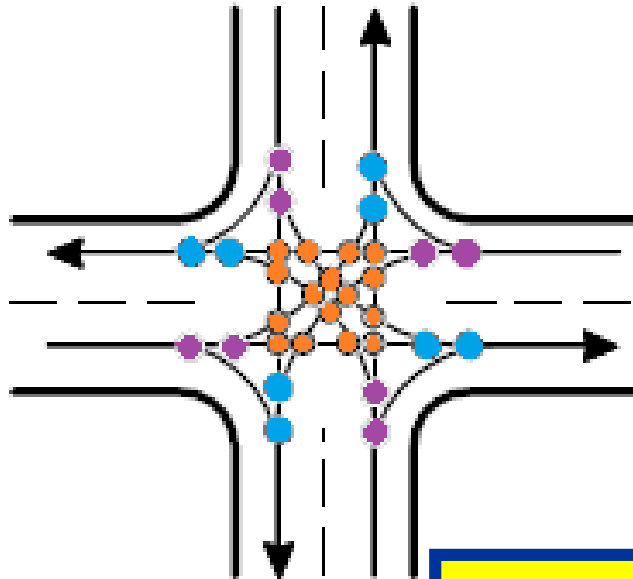


# A Modern Roundabout...



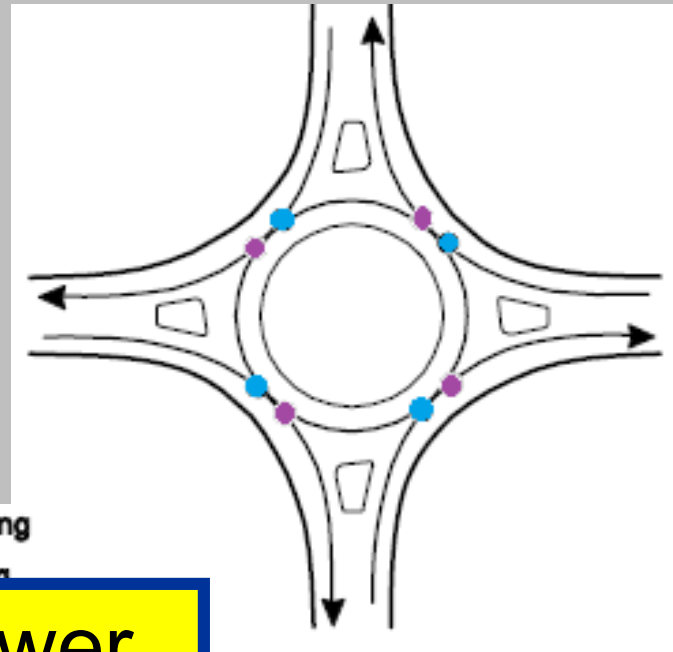


# Comparison of Vehicle Conflict Points



32 conflict points

- High-speed
- High-angle
- High-energy



8 conflict points

- Low-speed
- Low-angle
- Low-energy

100% fewer  
serious  
conflicts

# Crash Data: SR 31/Madison Hwy @ I-75

Year	Property Damage Only	Injury	Fatality	Total Crashes
2013	6	4	0	10
2014	12	5	0	17
2015	10	3	0	13
2016	4	2	0	6
2017	7	4	0	11

# Reasons for Using Roundabouts

## Improve system capacity

- Reduction in intersection delay
- Yield operation promotes minimal queuing
- Carry more traffic on existing road and bridge lanes.

## Many special situations

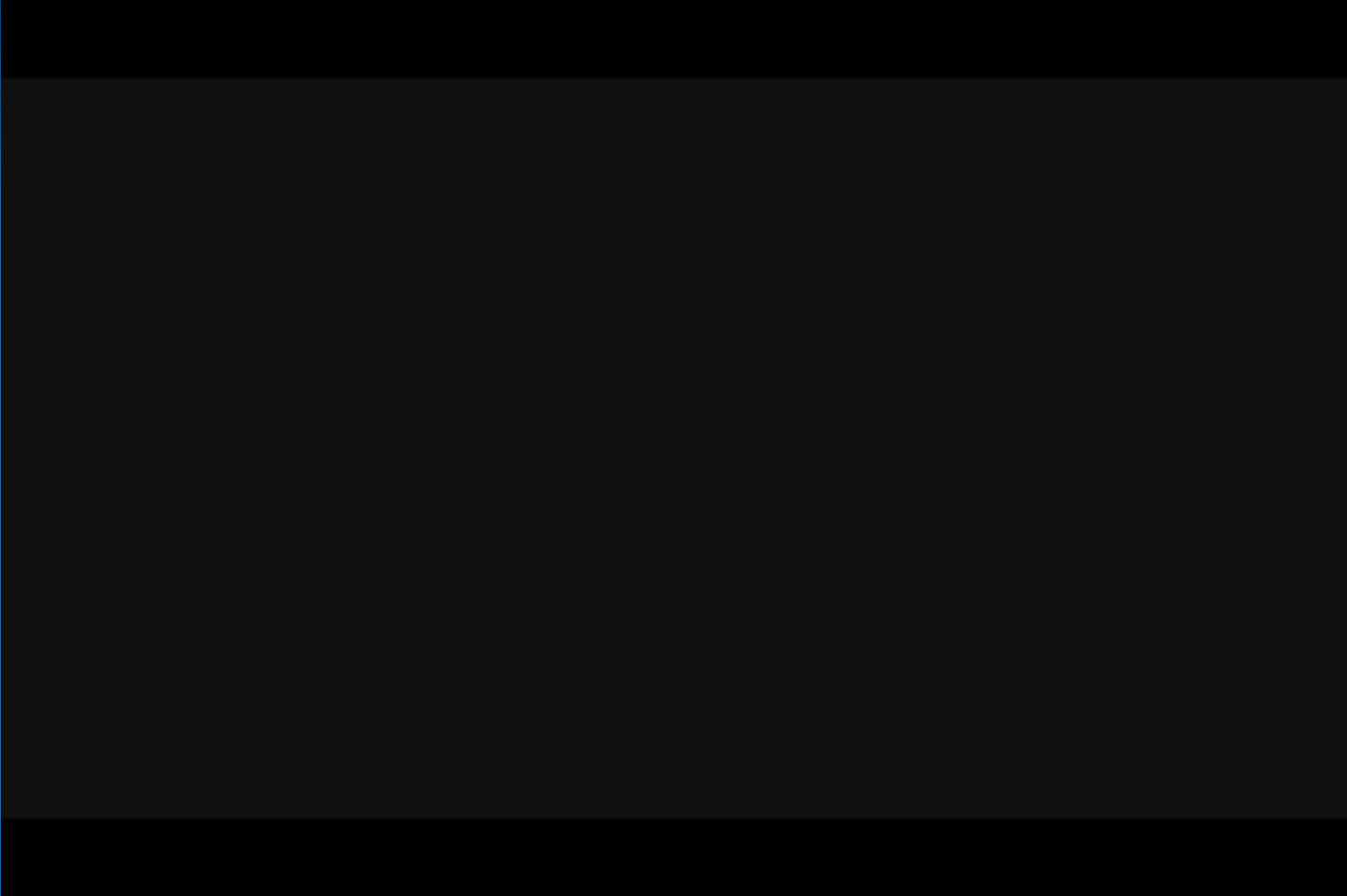
- Multiple legs at intersections, traffic calming, closely spaced intersections, high turning volumes at T-intersections, change in functional class/cross section, others.

## Accommodates all types of vehicles

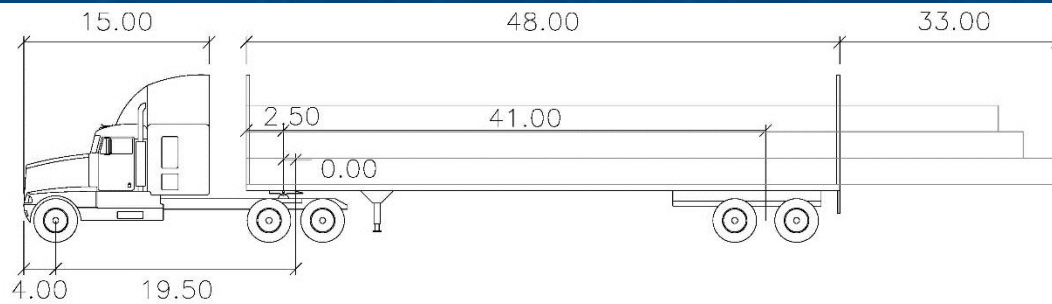
- Truck turning paths are run to ensure that the roundabout can accommodate large trucks and emergency vehicles. The truck apron helps to accommodate the turning movements of large trucks.



# Truck Use



# Truck Turning Template Checks



Logging Truck





# Roundabouts at Interchanges

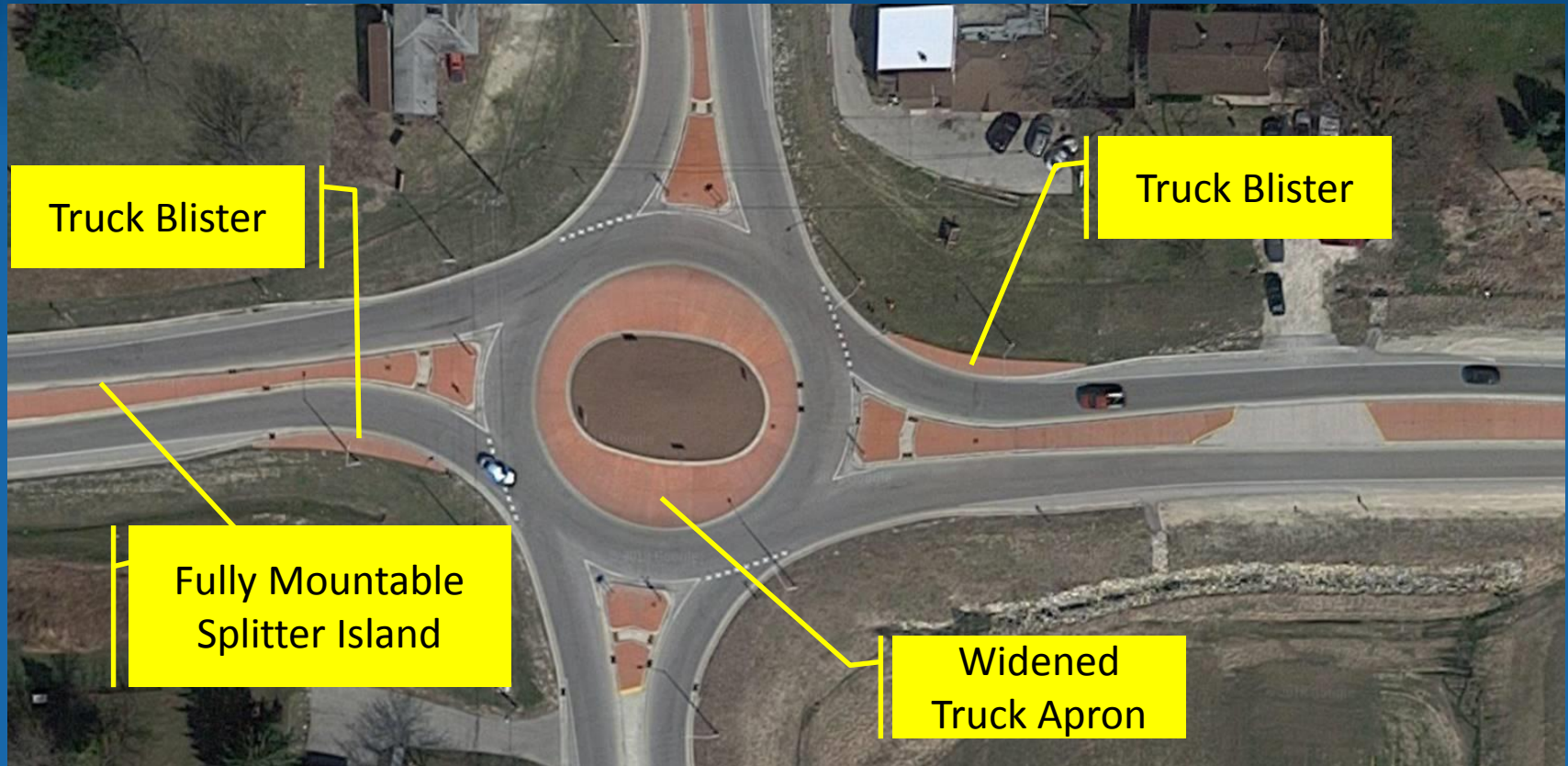




# Summarized Benefits of Roundabouts

- Promote Safety
  - Lowers traffic speeds without sacrificing capacity or total travel time
  - Reduces injuries and fatalities
  - Pedestrians crossing distances are shorter and require looking in one direction only
  - Simplifies driver and pedestrian tasks
- Decreased Delay
- Work well at interchanges
- Can easily be navigated by multiple vehicle types

# Features of the Lowndes County Interchange Roundabouts..



# Access Control Changes – Exit 2

- Added a right in / right out only driveway to the PFJ Southeast property.
- Added a shared right in / right out only driveway to Lake Park Hospitality and Westgate Resorts to prevent displacement of the two (2) commercial properties.
- Extended raised median on CR 274 to prevent left turns from the two (2) new drives.



# Access Control Changes – Exit 11

- Provided an access break for the revised frontage road (Carroll Drive)

# Design Changes to Accommodate Log Truck Vehicles – Exit 2

- Provided additional width in truck apron
- Fully Mountable Splitter Islands
- Flattened truck apron slope from 2% to 1% to help with truck vertical clearance (primarily for lowboys)

# Design Changes to Accommodate Log Truck Vehicles – Exit 11

- 2% Vertical Grade Added Across Roundabout
- Provided additional width in truck apron
- Blisters added on Entry and Exits
- Fully Mountable Splitter Islands



# Questions

